EXHIBIT A

UNITED STATES DISTRICT COURT

DISTRICT OF DELAWARE

In Re Adams Golf, Inc. Securities Litigation	)))))))	Consolidated C.A. No. 99-371 KAJ

REBUTTAL EXPERT REPORT OF CHRISTOPHER M. JAMES

I. Qualifications and Assignment

1. I have been asked on behalf of Defendants to respond to the expert report of R. Alan Miller ("Mr. Miller's report"). My qualifications are outlined in my expert report dated July 14, 2006 ("Dr. James' report").

2. In addition to the documents listed in my previous report, I have reviewed the following:

   a. R. Alan Miller expert report dated July 14, 2006.

   b. John F. Gould & Allan W. Kleidon, Market Maker Activity on Nasdaq: Implications for Trading Volume, *Stanford Journal of Law, Business & Finance*, November 1994.

   c. *Richard Kaufman v. Motorola, Inc.*, United States District Court for the Northern District of Illinois, Eastern Division, No 95 C 1069.

d. *Robert K. Bell v. Fore Systems, Inc.*, United States District Court for the Western District of Pennsylvania, Civil Action No. 97-1265.

II. Summary of Opinions

3. In an efficient stock market, a stock's price reflects the total mix of information available in the marketplace about the company's future earnings prospects and only *new material* information about a company's earnings prospects leads to a significant change its stock price. In order to determine whether information is new and material information, one must conduct a statistical analysis. The objective of a statistical analysis is to test whether the stock price is being affected *significantly* by any information. A significant stock price movement would indicate that new material information has entered the marketplace.

4. Mr. Miller's approach is to attribute the entire price decline of Adams Golf's stock during the class period to Plaintiffs' allegations about gray market information without conducting any scientific statistical analysis. None of Mr. Miller's assertions about materiality are based on scientific and objective methods, and he fails to provide any evidence that the gray market information was material. His analysis rests on 1) his subjective review of public and non-public information and 2) his unsupported claims. As a result, Mr. Miller has not provided a coherent estimation of any alleged Section 11 or Section 12(a)(2) damages.

5. Mr. Miller's methodology is flawed and it is not scientifically sound. Mr. Miller fails to isolate dates of material stock price movements and relate those stock

price movements to curative disclosures regarding alleged omissions and misrepresentations in the offering materials.

6. Mr. Miller provides no statistical analysis relating the stock returns of Adams Golf to industry or market factors nor does he provide any statistical analysis relating Adams Golf's stock returns to information regarding the risks associated with gray marketing. His analysis does not meet the standards of rigor and scientific objectivity that are a pre-requisite for publication in a peer-reviewed academic journal.

7. Putting any methodological problems aside, Mr. Miller's report presents no evidence of the materiality of Plaintiffs' specific allegations as he has shown no evidence of material price declines that can be directly linked to the disclosures of *new* information regarding Plaintiffs' *specific allegations*. He has instead chosen to accrue inflation, and thus damages, from price declines on numerous days whether or not the price movements on those days are statistically distinguishable from zero, whether the "news" he is pointing to is, in fact, new, or whether the news is even directly related to Plaintiffs' specifically enumerated allegations, thus ignoring materiality entirely.

8. Moreover, my event study provides statistical evidence that none of the information about the gray market disclosed during the class period resulted in a statistically significant stock price decline. Combined with the fact the Adams Golf disclosed the existence of the gray market before the IPO, I conclude that the information about the gray market was either not new or immaterial.

9. As I demonstrated in my previous report and discuss in this report, factors other than Plaintiffs' allegations about gray marketing—other information disclosed in the October 22, 1998 press release, general industry slowdown and Adams Golf's loss of market share—explain the decline in Adams Golf's stock price during the class period.

10. In my opinion, there are no damages from the offering attributable to Plaintiffs' allegations associated with the gray marketing and sales practice risks because there are no material price declines that can be causally linked to these allegations.

III. Mr. Miller's Analysis of Adams Golf's Stock is Unscientific

11. Mr. Miller attributes the entire decline in Adams Golf's stock price during the class period to investors learning about gray marketing problems. There is nothing from what Mr. Miller says or has turned over which suggests that he has considered any statistical and/or economic model to analyze Adams Golf's stock. His analysis lacks scientific rigor.

12. In this section I will demonstrate that Mr. Miller's claims about materiality of gray market information are subjective, unscientific and inconsistent with sound economic and statistical analysis. Mr. Miller presents no evidence of materiality resulting from Plaintiffs' specific allegations as he has shown no evidence of material price declines that can be directly linked to the disclosure of *new* information regarding Plaintiffs' *specific allegations*.

a) Mr. Miller Does Not Have a Reliable Statistical Model

13. Mr. Miller does not provide any statistical and/or economic model which attempts to analyze the stock price of Adams Golf. There is nothing from what Mr. Miller says or has turned over that suggests that he has considered any model.

14. As described in my previous report, the correct methodology to examine the materiality of new information should be a scientific and a systematic method. The event study methodology is widely-employed in academic research on the behavior of security prices.[1] The price of a security (such as common stock) in an efficient market reflects the total mix of information available in the marketplace about the company's future earnings prospects and only *new* material information about a company's earnings prospects changes security prices.

15. Security prices respond to a variety of information which is *not* specific to the firm but nonetheless affects the value of future earnings, including information about the broad economy and information about the particular industry in which the firm operates. The goal of an event study analysis is to remove such broad economic and industry effects from daily price movements and develop a model to quantify the firm-specific price movements.

16. The first step in event study analysis is to derive a relationship that explains security price movements based on broad economic and industry-specific factors. Once this relationship is modeled, a researcher can isolate the portion of daily

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[1] See, for example, Campbell, John, Andrew W. Lo and A. Craig MacKinlay, *The Econometrics of Financial Markets*, Princeton University Press, 1997.

security price movements that is firm-specific. Statistical tests can be applied to these daily firm-specific price movements to determine which are abnormal, or "statistically significant."

17. Statistically significant movements typically indicate that new, material firm-specific information about the firm's future earnings prospects reached the market that trading day. The relatively smaller movements on other days are typically the result of normal trading activity and do not represent the pricing-effects of material firm-specific information; such small movements are not statistically distinguishable from zero firm-specific movement.

18. No damages should result from firm-specific price movements that are not statistically significant. This is because such normal movements cannot be causally tied to *any* firm-specific information, let alone to potentially curative disclosures relating to this litigation. These movements are typically a result of general market and industry trends or normal, volatile trading behavior.

19. As I discussed in my previous report, to determine what factors are moving security prices over the relevant time periods, I performed an event study and analyzed each day where there was a statistically significant share price movement. Only the days on which new firm-specific information was released that relates to Plaintiffs' allegations can be claimed by Plaintiffs as days on which they suffered any damage. The movements on other significant days are the result of firm-specific news (negative or positive) that is unrelated to this litigation and for which no damages can result. In my previous report, I provided a full discussion about the event study methodology and the results of my analysis.

20. Furthermore, market efficiency implies that once a curative disclosure is made, no future price changes after the immediate reaction can be attributed to Plaintiffs' allegations. Thus, any price declines after the first curative disclosure cannot be claimed as losses caused by Plaintiff's allegations.

21. Mr. Miller fails to present a statistical and/or an economic model to analyze Adams Golf's stock returns. In addition, Mr. Miller fails to account for the effects of broad economic, industry-specific, and firm-specific factors, unrelated to alleged omissions of gray market information from the Prospectus, that cause the value of Adams Golf's stock to decline substantially during the class period. Mr. Miller's unscientific approach results in an overestimation of damages per share attributable to Plaintiffs' allegations.

b) Mr. Miller's Report on Materiality

22. Mr. Miller fails to offer any scientific methodology and/or acceptable financial economic approach to address whether announcements concerning gray marketing were material to Adams Golf's stock price. In this section, I will discuss Mr. Miller's approach. Mr. Miller proposes several curative disclosure dates on which information about gray marketing was available to some market participants, and concludes that they obviously were material. He does not provide any statistical and/or scientific analysis to support his claims.

23. After a discussion of Mr. Miller's methodology, I will describe the correct and scientific financial economic approach (i.e., using an event study) to analyze

whether any information during the class period about gray marketing had a material impact on Adams Golf's stock price (the event study methodology was discussed in the previous section and in my previous report as well).

24. First Mr. Miller states, "There can be no question that the risk and impact of gray marketing were material to investors or potential investors in Adams Golf."[2] Then, Mr. Miller offers several dates (pre-IPO and post-IPO) on which information about gray marketing was available to at least some market participants. And lastly, he concludes, "The materiality of the risks and extent of gray marketing is further demonstrated by price declines following the IPO related to various partial disclosures of these matters, viewed through appropriate disclosure event windows."[3] Mr. Miller does not point to any significant stock price reactions to the release of information about gray marketing, which one would expect in an efficient market, and therefore fails to demonstrate that the information about gray marketing was either new or material to investors after Adams Golf's IPO.

(i) Pre-IPO Disclosures and Secondary Market Prices Immediately After the IPO

a) June 9, 1998

25. The first date Mr. Miller addresses is June 9, 1998. In the press release issued by Adams Golf on June 9, 1998, before the IPO, Adams Golf first disclosed the

[2] Mr. Miller's report page 7, ¶13.
[3] Mr. Miller's report page 11, ¶17

existence of gray marketing. The Company issued a press release announcing it had filed a Bill of Discovery against Costco.[4]

26. Mr. Miller states that the June 9, 1998 press release was indicative of the importance of gray marketing as recognized by Adams Golf.[5] He admits that this new information was released to the marketplace by the Company before the IPO and at the time of the IPO was part of the total mix of information.

27. At the time of Adams Golf's IPO, it was widely known that gray marketing was occurring at the industry level. Mr. Miller mentions that he reviewed Callaway's 1997 10K, but he does not mention that the 10K indicates that gray marketing was an industry-wide issue, and was part of the total mix of information that both the underwriters and investors possessed before the IPO, as mentioned in my previous report.[6] Titleist, a brand owned by Fortune Brands, another golf club industry peer, also disclosed information about its gray marketing issues in a May 18, 1998 press release.[7]

28. The information about gray marketing faced by Adams Golf and the overall industry were part of the total mix of information before the IPO. These disclosures, in conjunction with Adams Golf underwriters' deposition testimony, clearly show that the underwriters knew of the gray marketing faced by Adams Golf, as well as its industry peers, before Adams Golf's IPO, and considered it as one of many factors in their due diligence process.[8] Given that the gray

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[4] Dr. James' report page 12, ¶26
[5] Mr. Miller's report page 7, ¶13.
[6] Dr. James' report page 13, ¶27
[7] Dr. James' report page 13, ¶28
[8] Dr. James' report page 14, ¶29

marketing disclosures were part of the total mix of information considered by both the underwriters and investors at the time the offering price was determined (based upon supply and demand forces during the pre-IPO process), no damages could be attributed to the alleged omissions of the gray marketing from the Prospectus.

29. Mr. Miller mentions on page 9, ¶15 that "Strong indications of interest and demand for shares will cause an increase in [offer] price; weak demand will cause a reduction in [offer] price." Since the information about gray marketing at Adams Golf was part of the total mix of information starting June 9, 1998, and given the general knowledge of gray marketing in the industry, market participants would factor this information into their demand for Adams Golf's stock and thus it would be reflected in the IPO offer price.

b) July 10, 1998

30. Mr. Miller recognizes in his report that on July 10, 1998, market participants also knew of the risk of the gray market due to the disclosure on June 9, 1998.[9] However, Mr. Miller fails to address the lack of materiality of this information in the public domain when the stock for Adams Golf started to trade on July 10, 1998. The existence and risk associated with gray market sales were already reflected in the price of Adam Golf's stock when it began trading in the secondary market on July 10, 1998. On the first day of trading, July 10, 1998, the closing price of Adams Golf's stock was $18.375, which was above the IPO offer price of $16.00. Since Adams Golf's stock price did not decline on July 10, 1998, I

[9] Mr. Miller's report, pages 8-10.

conclude that the information provided by the first disclosure of gray marketing was either already embedded in the offer price or otherwise not material. There is no evidence of any loss arising from the alleged omissions of gray marketing in the Prospectus.

(ii) Post-IPO Analysis of Additional Gray Market Discussion

31. Post-IPO, Mr. Miller suggests several dates on which information about the gray market was disclosed to the marketplace. Mr. Miller states that these disclosures are clearly significant and therefore material, however, he again fails to provide any statistical or economic support to his claims.

a) July 29, 1998

32. The first post-IPO disclosure date that Mr. Miller proposes is July 29, 1998. On page 9, ¶14, he writes, "In a memorandum to Adams Golf dated July 29, 1998, Lehman Brothers personnel advised Adams to be prepared to answer investor questions about gray marketing."

33. To begin, this information was an internal document or otherwise a nonpublic document which discussed the gray market allegation, and not part of the total public mix of information. Mr. Miller states on page 7, ¶13 of his report that "There can be no question that the risk and impact of gray marketing were material to investors...," however he fails to provide any indication concerning how the information supposedly impacted Adams Golf's stock price. In the financial economics academic literature there is no evidence to support the notion that private information or nonpublic information affects stock prices.

34. Moreover, the lack of a significant stock price reaction on July 29, 1998 or the following trading day demonstrates that the nonpublic information in the memo about the gray market was either not new or not material. On July 29, 1998, Adams Golf's stock residual return was 2.4%. In case the memo was issued after the close of trading, I also looked at Adams Golf's stock residual return the next trading day. On July 30, 1998, Adams Golf's stock residual return was a decline of less than 1%. The residual returns on both days were statistically insignificant.

b) August 1, 1998

35. The next post-IPO date that Mr. Miller[10] suggests as being material is August 1, 1998. On that date, *Golf Pro* published an article containing a reference to gray marketing at Adams Golf and its competitors.[11]

36. Furthermore, on page 10, ¶16.C, Mr. Miller contradicts himself and states that the *Golf Pro* article "...was apparently available in the middle of July and discussed gray market concerns." Despite the published date on the article, Mr. Miller does not provide any evidence that the article was available in mid-July.

37. Again, in an efficient market, if the information about the gray market disclosed in the *Golf Pro* article is new to the marketplace and it has a material impact on the total mix of information, one would expect that the stock price for Adams Golf would react significantly. Mr. Miller does not investigate the statistical significance of the Adam Golf's stock returns associated with the publication of the *Golf Pro* article. He only states on page 7, ¶13 of his report that "[t]here can

[10] Mr. Miller's report page 8, ¶13 A
[11] Dr. James' report page 24, ¶56

be no question that the risk and impact of gray marketing were material to investors or potential investors in Adams Golf."

38. In my previous report I found that Adams Golf's residual stock price movement was -4.1% on August 3, 1998 (the first trading day after *Golf Pro*'s publication); however, this decline is not statistically significant, meaning that the decline was attributable to market movement rather than firm-specific information. This is consistent with the conclusion that the information about gray marketing was either not new or not material to the market.

39. Moreover, Mr. Miller suggests that the *Golf Pro* article was available to investors already in mid-July 1998 (again, without providing any support for his claims). My objective event study analysis found that there are no statistically significant price declines during the month of July 1998. This evidence indicates that even if Mr. Miller's unfounded claims are correct, the information disclosed in the *Golf Pro* article about the gray marketing was either not new or not material to investors.

c) August 4, 1998

40. The next date that Mr. Miller suggests was important, is August 4, 1998. On page 10, ¶16.D, Mr. Miller states "An August 4 Nations Bank analyst report states that when it was a new company, Callaway's shares were 'often volatile in response to concerns such as "I saw a Big Bertha in Costco"', and that 'We expect Adams stock to also be volatile.'" Not only is Mr. Miller mistaken about the name of the bank, but more importantly, he also misrepresents the analyst's comment. The complete quotation from the NationsBanc analyst report states, "Callaway shares

were often volatile in response to concerns such as 'I saw a Big Bertha in Costco' or 'some retailer offered a Big Bertha at $10 below an earlier price' that proved to be irrelevant. We expect Adams stock to also be volatile."

41. The NationsBanc analyst's comments about the volatility of Callaway's stock price and its relation to the volatility of Adams Golf's stock prices have nothing to do with the materiality of the gray market information. Since the gray marketing information was available to investors prior to August 4, 1998, it should not cause the stock to be more volatile starting August 4, 1998, i.e., it was already part of the total mix of information. In addition, regardless of how volatile Adams Golf's stock had been, Mr. Miller does not establish that this information was material.

42. The NationsBanc disclosure on August 4, 1998 was either not new information or not material, as evidenced by the stock price increase on that day. In case the NationsBanc analyst report came out after the market closed, I also looked at the following trading day. On August 5, 1998, the residual return was 0.7%, which is statistically insignificant.

d) August 28, 1998

43. Mr. Miller next addresses August 28, 1998 and states in ¶¶16, 16.F that "Information concerning gray marketing which existed in the marketplace... included (at least) the following. ...Lehman Brothers' August 28, 1998 report mentions speaking with golf shops over 'the past three months' as the basis for their comments, including the appearance of Adams clubs in Costco as 'an extremely serious issue that Adams is working hard to correct.'"

44. Despite Mr. Miller's contention that the Lehman Brothers report was new material information, the report failed to elicit a statistically significant reaction in the price of Adams Golf's stock. If the Lehman report was published before the market closed on August 28, the relevant residual stock price return was a decline of less than 1%; if published after the market closed, the residual stock price return on the next trading day (Monday, August 31) was -5.2%. Neither decline is statistically significant.

e) October 8, 1998

45. The next date that Mr. Miller suggests was important is October 8, 1998. On page 8, ¶13.B Mr. Miller states "Barney Adams issued an internal memorandum dated October 8, 1998 which stated: 'One thing that is hurting us badly is Costco. It was a problem before, but has greatly escalated in the last two weeks and will be very difficult in Q4 (Christmas).' 'We estimate a negative sales effect in Q4 of 20%-25%...'"

46. First, the information about the gray market was already disclosed at least three times prior to this date, on June 9, 1998, on August 1, 1998 and on August 28, 1998. Certainly Adams Golf was aware that the gray marketing existed and this seemed to be an industry-wide issue. Mr. Miller seems to suggest the future "impact" of the problem should have been disclosed in the Prospectus. However, Mr. Adams' quote on page 8, ¶13.B demonstrates that the gray marketing had "... greatly escalated in the last two weeks...." Thus, this information does not appear to have been knowable at the time of the IPO.

47. Moreover, this information was an internal document or otherwise a nonpublic document which discussed the gray market allegation, and not part of the total *public* mix of information. Mr. Miller states on page 7, ¶13 of his report that "There can be no question that the risk and impact of gray marketing were material to investors...," however he fails to provide any indication about how the information impacted Adams Golf's stock price. In the financial economics academic literature there is no evidence to support the conclusion that private information or nonpublic information affects stock prices. This is further supported by the fact that Adams Golf's stock residual return is 3.7% on October 8, 1998 and statistically insignificant. In case the internal memo was distributed after the close of trading, I also looked at the residual return on October 9, 1998, which was -2.1% and also statistically insignificant.

f) A Set of Trading Days in the Aftermarket

48. Mr. Miller refers to a vague set of trading days in the aftermarket. He states that "Information concerning gray marketing which existed in the marketplace... included (at least) the following. ... Documents reflecting the underwriters' and their customers' trading activity in Adams stock throughout the aftermarket, implying that the underwriters' knowledge [of gray marketing] would have been reflected in the stock price."[12]

49. Again, Mr. Miller fails to demonstrate that the information about gray marketing was new material information which had an impact on Adams Golf's stock price. Instead Mr. Miller chooses to make unsupported statements and ignores the facts

[12] Mr. Miller's report pages 9 and 10, ¶¶ 16 and 16 E

of this case. As I addressed in my previous report, the regression model estimation indicates that there are only three significant days during the class period at a 95% confidence interval: August, 12, 1998; September 1, 1998; and October 23, 1998. None of these days can be considered as curative disclosure dates since none of these dates contains new information directly linked to Plaintiffs' allegations about gray marketing.

g) October 22, 1998

50. Lastly, Mr. Miller addresses October 22, 1998.[13, 14] On October 22, 1998 at 7:10 PM, Adams Golf issued a press release. As part of its press release Adams Golf announced that (1) it expected fourth quarter sales to be affected by weakness in the golf equipment market; (2) it anticipated fourth quarter sales to be further impacted by "the recent gray market distribution" of its products; and (3) it anticipated net income for the fourth quarter to be at or slightly above a break even level. In addition, analysts revised their fourth quarter consensus earnings estimates on October 23, 1998 from $0.11 per share to $0.05 per share. On October 23, 1998, Adams Golf's stock price declined significantly, rapidly incorporating the new unexpected information. On October 23, 1998 the price of

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[13] Mr. Miller also mentions October 19, 1998, the date on which the Company held a Special Meeting of the Board of Directors in advance of the October 22, 1998 press release. Mr. Millers states that "[t]he minutes... show the major topic to have been the substantial negative effects of gray marketing." Again, this information was an internal document, and there is no evidence in financial economics academic literature that nonpublic information affects stock prices. Moreover, Adams Golf's stock residual return on October 19, 1998 was 5.3% and statistically insignificant. In case the meeting took place after the market closed, I also looked at Adams Golf's stock residual return on October 20, 1998, which was -0.4% and statistically insignificant.

[14] Mr. Miller also offers several disclosure dates after the end of the class period. However, because the alleged inflation had to have been cured by the end of the class period, I did not consider these disclosures to be relevant.

Adams Golf's stock fell 16.2% or $0.75. The residual decline was -14.1% and statistically significant.

51. However, it is my opinion that this decline is *not* attributable to the gray market discussion in Adams Golf's press release. My analysis of the first gray market disclosure on June 9, 1998, as well as the additional public discussions on the subject in August of 1998, shows that gray marketing information was either immaterial, or had already been incorporated into the IPO offer price and was therefore not new.

52. In any event the risks associated with gray marketing were reflected in Adams Golf's stock price well before October 23, 1998. The statistically significant decline on October 23, 1998 must therefore be attributable instead to the other news that was added to the total mix of information at that time. In the October 22, 1998 press release, Adams Golf announced that it expected fourth quarter sales to be affected by weakness in the golf equipment market. The company also disclosed that it anticipated net income for the fourth quarter to be at or slightly above a break even level. Furthermore, analysts revised their fourth quarter consensus earnings estimates on October 23, 1998 from $0.11 per share to $0.05 per share. Unlike the gray marketing discussion, this information was both new and material to the market, which explains the statistically significant drop in Adams Golf's stock price on October 23, 1998.

IV. Negative Causation

53. In this section, I will demonstrate that factors other than the alleged omissions of gray marketing information caused the decline in value of Adams Golf's stock price during the class period.

54. The decline in Adams Golf's stock price was caused by factors other than the alleged omissions about gray marketing: other new information disclosed in the October 22, 1998 press release, general industry softness and Adams Golf's loss of market share. My event study analysis shows that the information about gray marketing was known before the IPO, and therefore was part of the total mix of information. In its press release issued after market close on October 22, 1998, Adams Golf disclosed new information to the market, and mentioned again information about gray marketing. Given the prior disclosures regarding gray marketing, the October 23, 1998 price decline must be attributable to the other information disclosed in the press release. In addition, during the class period Adams Golf's stock price declined due to an industry-wide decline in demand and new competitive products in Adam Golf's segment of the market.

a) The October 22, 1998 Press Release

55. As discussed in the previous section, none of the disclosures before October 22, 1998, which Mr. Miller cites in his report, were statistically significant; therefore none of them could be viewed as either new information or material information that could have changed the total mix of information; therefore, none of these disclosures can be linked to Plaintiffs' specific allegations about gray marketing.

56. The only statistically significant disclosure was the October 22, 1998 press release.[15] After the close of trading on October 22, 1998, Adams Golf announced operating results for the third quarter of 1998. In addition to several other pieces of information, the press release stated that the company anticipated its fourth quarter sales to be impacted by "the recent gray market distribution" of its products. On October 23, 1998 the price of Adams Golf's stock fell 16.2% or $0.75. The residual return was -14.1% and statistically significant.

57. My previous report and my current analysis of materiality in the preceding section clearly demonstrate that the information about Adams Golf's gray marketing and the industry-wide issue with gray marketing were part of the total mix of information even before the IPO. From the first disclosure on June 9, 1998 as well as the additional public press on the subject in August of 1998, it has been shown that gray marketing information was either not material, or had already been embedded in the IPO offer price and was therefore not new.

58. Therefore, I conclude that the statistically significant decline on October 23, 1998 must be attributable instead to the other news that was added to the total mix of information at that time. In the October 22, 1998 press release, Adams Golf announced that it expected fourth quarter sales to be affected by weakness in the golf equipment market. The company also disclosed that it anticipated net income for the fourth quarter to be at or slightly above a break even level. Furthermore, analysts revised their fourth quarter consensus earnings estimates on October 23, 1998 from $0.11 per share to $0.05 per share. Unlike the gray

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[15] "Adams Golf Reports Third Quarter Operating Results," PR Newswire, 10/22/98, 7:10 PM

marketing discussion, this information was both new and material to the market, which explains the statistically significant drop in Adams Golf's stock price on October 23, 1998.

59. Further evidence that the significant stock price reaction was not related to the gray market allegation is the fact that the analysts did not emphasize the gray marketing issue in their reports when they revised their estimates and/or price targets for Adams Golf downward. Instead they pointed to other items in the press release. For example:

   a. Lehman Brothers stated on October 23, 1998: "Top-line growth was slowed by weakening end-demand for all golf equipment and intense competition in the fairway wood market (particularly in off-course stores)."

   b. Ferris Baker Watts stated on October 26, 1998: "We are lowering Q4:98 EPS to $0.02 from $0.09 based on increased marketing expenses, and 1999 to $0.85 from $0.88...."

   c. Ferris Baker Watts also stated the following on October 28, 1998: "With competition in the shallow-faced fairway woods market intensifying, and having the need [to] add additional clubs to what is basically a one-club arsenal, we believe Adams Q4:98 strategy of increasing marketing expenses to defend its market position... will continue in 1999. ... Despite the increased marketing efforts, we are lowering our expectation for domestic Tight Lies sales in 1999 to a 19% decline from an 11% decline due to stiff competition, the

anniversarying of this year's pipeline fill, and an ever-shortening maturity cycle of metalwoods in today's market."

d. Lehman Brothers stated on November 6, 1998: "[W]e are lowering our 1999 EPS projections to $0.50/share from $0.88/share. Weak demand for all golf clubs, over-supply of merchandise in the retail channel, and increased competition have converged to weaken the near-term outlook for Adams. Higher marketing costs tied to the introduction of a driver and likely weaker sales of the company's Tight Lies fairway woods are the primary reasons for our earnings reduction."

b) Industry-wide Factors Affecting Adams Golf Stock's Price

60. As discussed in my previous report, Adams Golf's stock price declined for reasons completely unrelated to the alleged omissions or misrepresentations in the Prospectus. During the class period, Adams Golf's stock price declined from an IPO offer price of $16.00 to a closing price of $3.875 on October 23, 1998. Exhibit 9 in my previous report lists some of the industry information released in the last half of 1998, describing the problems confronting the industry and general weakness in the market that impacted the results of several of Adams Golf's competitors.

61. Mr. Miller mentions in his report that he has reviewed the Golf Datatech information, the daily index data on Bloomberg Golf Index, press releases and

analysts' reports on Adams Golf,[16] but he provides no mention of how this impacts his analysis. Mr. Miller fails to recognize that most of the decline in Adams Golf's stock price during the class period was due to 1) the general slowdown in the golf industry during the second half of 1998; and 2) the decline of Adams Golf's market share relative to Orlimar, one of its smaller competitors that was not publicly traded.

62. It is clear that all the competitors in the golf industry were facing a very competitive environment and a general slowdown in the golf industry. Adams Golf's stock price was still influenced by industry factors (see Exhibit 10 in my previous report). More specifically, it was strongly affected by Orlimar, one of its smaller competitors that was not publicly traded. Orlimar was Adams Golf's closest competitor in the fairway woods product segment, as it had introduced a club much like Adams Golf's Tight Lies in January 1998. Orlimar quickly began to take sales, or market share, away from Adams Golf. Exhibit 11 in my previous report illustrates the market share increase experienced by Orlimar, which coincided with a decline in Adams Golf's market share.

63. In my previous report, I have demonstrated the strong correlation between the decline in the relative market share of Adams Golf (relative market share of Adams Golf is Adams Golf market share divided by Orlimar market share) to the decline in Adams Golf's stock price (see Exhibit 12 and Exhibit 13 in my previous report).

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[16] Mr. Miller's report, page 6, ¶11

V. Other Flaws in Mr. Miller's Report

64. The analysis in the previous sections shows that Mr. Miller failed to demonstrate the materiality of the gray market information and its impact on Adams Golf's stock price during the class period. In addition, I have shown that the price decline in Adams Golf's stock from the IPO on July 10, 1998 until October 23, 1998 can be explained by factors other than Plaintiffs' allegations. In this section, I will address additional flaws and unscientific approaches taken by Mr. Miller, and will demonstrate that his results are unreliable and lack any systematic statistical and/or economic foundations.

a) Market Reaction to New Material Information in Efficient Markets

65. Mr. Miller states on pages 9-10, ¶16 "Information concerning gray marketing which existed in the marketplace and was available to *at least some market participants* included (at least) the following... At a minimum, the people who would have known about this information [Adams Golf's club sales at Costco] would have been Costco personnel and customers and the various Adams distributors whom Costco directed to purchase the clubs. It would be surprising if there were not some significant overlap between these various parties and investors in Adams Golf stock, as it is common practice with a niche company such as Adams Golf, for its stockholders to be people with an interest in such a market or company, such as avid golfers, distributors, retailers, suppliers, and others with a likely knowledge of the company and the market. Accordingly, knowledge among Adams authorized dealers that widespread gray marketing was

occurring *may have represented important leakage* to the market for Adams' stock." (emphasis added). He also says on page 11, ¶17 "The materiality of the risks and extent of gray marketing is further demonstrated by price declines following the IPO related to various partial disclosures of these matters, viewed through appropriate disclosure event windows."

66. Again, Mr. Miller makes general statements about the market for Adams Golf's stock without any scientific evidence and ignores the facts of this case. First, Mr. Miller's provides no economic or statistical support for his conjecture about "leakage." In my previous report, I have established that Adams Golf's stock was traded in an efficient market. In an efficient market, stock price changes will result from new information concerning the company and its business, rather than in an arbitrary manner without reference to new information that should affect the stock's value.

67. Thus, once new information (or unexpected news) about the company and its business enters the public domain, this information remains part of the total mix of information and is embedded in the stock price until new information arrives. In the case of Adams Golf's stock, the market was efficient; therefore any disclosures about gray marketing would be incorporated in the stock price when this information entered the public domain. It would then remain embedded in the stock price until any new information materially changed the total mix of information, causing a statistically significant change in Adams Golf's stock price. Adams Golf disclosed on June 9, 1998 information about sales at Costco,

and this information had become part of the total mix of information prior to the IPO and thereafter.

68. Again, Mr. Miller's suggestion about "leakage" implies that information is incorporated in stock prices slowly over time. However, the speed of the reaction to new information is very rapid in an efficient market. As discussed in Brealey and Myers, "prices will adjust immediately to public information" in an efficient market.[17] Brealey and Myers cite a study by Patell and Wolfson of the market's reaction to the public announcement of companies' earnings and dividends, which shows that "the major part of the adjustment in price occurs within 5 to 10 minutes of the announcement."[18]

69. Second, Mr. Miller makes claims about information regarding sales at Costco that various alleged "investors" (e.g., avid golfers, distributors, retailers, suppliers, Costco personnel and customers, etc.) had: "It would be surprising if there were not some significant overlap between these various parties and investors in Adams Golf stock". This statement is unfounded and unscientific; again, Mr. Miller does not provide any facts and/or analyses that support his claims that various parties that were involved in the sales at Costco were also investors in Adams Golf's stock.

70. Moreover, if Mr. Miller were correct that those who knew about the gray marketing were Adams Golf's investors, then this information would be part of the total mix of information. This implies that there are no damages since it was

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[17] Brealey and Myers, 7th Ed., p. 351.

[18] Brealey and Myers, 7th Ed., p. 353, citing Patell and Wolfson, 1984, "The Intraday Speed of Adjustment of Stock Prices to Earnings and Dividend Announcements," *Journal of Financial Economics* 13, 223-252

not new information. The event study presented in my previous report provides scientific evidence that there are no significant price reactions to any of the publicly available information about gray marketing, and also there are no other significant days during the class period that could be linked to other available information about gray marketing. Thus, this information was either not new or immaterial.

b) Mr. Miller's Trading Model

71. Mr. Miller makes further errors in using an assumed trading model to calculate aggregate damages. Such models have not been generally accepted or tested in the economics profession, and error rates for such models are not known. Even among those models, Mr. Miller's is particularly poorly conceived and implemented.

(i) A Trading Model is Unnecessary to Calculate Aggregate Damages

72. Aggregate damages are based on two distinct analyses. The first concerns per-share damages, which are analyzed in the report above, and as I concluded there are no damages per share attributable to Plaintiffs' allegations associated with the gray marketing and sales practice risks because there are no material price declines that can be causally linked to these allegations. The second component of aggregate damages, however, is intrinsically tied to the particular trading behavior of individual Plaintiffs during the class period. Total damages for an individual Plaintiff are a function of the per-share damages on the particular dates

on which he or she traded. An accurate measurement of that Plaintiff's damages, if any, will depend on the particular timing and amount of trading during the class period.

73. Mr. Miller calculates aggregate damages using an assumed trading model. Such models have not been generally accepted or tested in the economics profession and error rates for such models are not known. Total damages, including correct application of the PSLRA, can be calculated from the application to per-share damages of actual shareholder trading records gathered through proofs of claims, without resorting to Mr. Miller's unsupported computer trading model.

74. Trading models attempt to simulate the trading behavior of individuals during the class period. There has been little systematic study of actual recoverable damages in securities class actions compared with estimates provided by computer models that are not based on individual Plaintiffs' trading records or proofs of claim. Extant studies rely on a limited sample of anecdotes. Nevertheless, every study of which I am aware demonstrates that any computer model that is not based on individual Plaintiffs' trading records and proofs of claim cannot accurately measure aggregate recoverable damages in a securities class action. While there is dispute concerning exactly how inaccurate such computer models are, and some dispute concerning the reasons for their inaccuracy, the evidence is clear that they are inaccurate.

75. In *Kaufman v. Motorola*,[19] the Court held that a computer model that assumed all shareholders can be treated as trading with equal probability – the so called one-trader or proportional trading model – was inadmissible under Daubert standards. In *Fore Systems, Inc. Securities Litigation*,[20] the Court held that another computer trading model was inadmissible because the PSLRA mandated an individualized damages limitation for each Plaintiff that was not satisfied by the computer model's estimates. Mr. Miller's computer trading model suffers from similar flaws.

(ii) Flaws in Mr. Miller's Trading Model

76. Setting aside the fact that a trading model is unnecessary, Mr. Miller's particular trading model has many flaws. I discuss a number of them briefly.

a) It is widely recognized that Nasdaq's reported trading volume for common stocks is overstated. Mr. Miller reduces the reported daily trading volume for Adams Golf by 30% to calculate actual daily trading volume.[21] Kleidon & Gould (1994)[22] found that reported Nasdaq trading volumes should be reduced by approximately 58%, on average, to estimate true trading volume. This error causes Mr. Miller to overestimate all of his aggregate damages figures.

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[19] *Richard Kaufman v. Motorola, Inc.*. United States District Court for the Northern District of Illinois, Eastern Division, No. 95 C 1069.
[20] *Robert K. Bell v. Fore Systems, Inc.*, United States District Court for the Western District of Pennsylvania, Civil Action No. 97-1265.
[21] Mr. Miller's report, Exhibit B, page 3
[22] John F. Gould & Allan W. Kleidon, Market Maker Activity on NASDAQ: Implications for Trading Volume, *Stanford Journal of Business and Finance*, Fall 1994.

b) Mr. Miller's trading model relies on a calculation of the number of Adams Golf shares that were available for trade during the class period ("the float"). He overestimates the number of shares available for trade by taking as his starting point the maximum number of shares issued as a result of the IPO, including the 900,000 over-allotment shares held by the underwriters, which were not all exercised on the first day of trading.

c) Most trading models used in securities cases work with *daily* trading volumes, which at least synchronizes with daily closing prices and daily estimates of inflation. Mr. Miller's trading model, on the other hand, groups trading days into aggregates he calls "model subperiods."[23] As implemented, Mr. Miller's trading model is unable to predict *daily* trading volumes or predict, for a share purchased on a particular *day*, what later *day* is that share sold. Moreover, the choice of the number of subperiods and the binning of a day into the prior or subsequent subperiods are judgmental, subjective, and un-reproducible (ex ante).

d) After Mr. Miller has estimated the float and daily trading volume and collected trading days into model subperiods, he applies an assumed "decline curve." Miller's decline curve is an estimate of a sequence of trading probabilities for subsequent periods. The decline curve is an arbitrary, unpublished and non-peer-reviewed methodology. I have no reason to believe that (nor do I have any way of knowing whether) Miller's

[23] Mr. Miller's report, Exhibit B, page 4. He does say his decline curve is "based to some degree on PIBC's experience with stock trading in general as well as continual research and communications with market participants. . " Mr. Miller's report, Exhibit B, page 3

assumed decline curve accurately predicts when Adams Golf shares bought in model subperiod 1 would be sold in subsequent periods.

e) Mr. Miller does not explain how he estimates the decline curve. He does, however, say that a key determination is "the float turnover rate, that is the number or fraction of times the float turns over during the class period."[24] "For Adams Golf, the class period adjusted volume was 28.18 million shares; thus, the 6.9 million share float turned over about four times during the class period."[25] As discussed above, however, Mr. Miller overestimates actual trading volume and inaccurately estimates the float. These errors likely mean that his float turnover rate is inaccurate.

f) Not surprisingly, a simple assumed decline curve applied throughout the class period does not accurately predict traded volumes. Sometimes Mr. Miller's decline curve underestimates and sometimes it overestimates, in the aggregate, subsequent trading volumes. Mr. Miller calls overestimation "discrepancies" and then makes manual "revisions" to his model, without any systematic method.[26] The need for adjustments is a result of his predictive model failing to accurately predict subsequent volumes. Unfortunately for the integrity of the trading model, the manual "revisions" Mr. Miller makes are subjective and unscientific.

[24] Mr. Miller's report, Exhibit B, page 3.
[25] Mr. Miller's report, Exhibit B, page 4
[26] "The decline curve for certain model subperiods is then adjusted if necessary based on actual market conditions,as follows: The model detects and flags discrepancies of sale allocations. It tracks the allocations of purchased shares to subsequent selling subperiods to detect if more shares are being assigned for sale in any given subperiod than were actually traded. When such discrepancies are flagged, the decline curve is revised for the appropriate subperiod(s)." Mr. Miller's report, Exhibit B, page 4

VI. Conclusions

77. In my opinion, Mr. Miller's report lacks scientific support and his damages analysis is flawed. Materiality, in financial economics, is determined by a scientific statistical analysis, and not by subjective judgment and a selective read of events. Mr. Miller's analysis fails to demonstrate that any of the alleged omissions about the gray market were materially new information. Moreover, an analysis of the dates Mr. Miller identifies as gray market disclosure dates demonstrates that the gray market disclosures after the IPO have no significant impact on Adams Golf's stock price (since it was already part of the total mix of information before the IPO). Mr. Miller's report presents no evidence for the materiality of Plaintiffs' specific allegations as he has no evidence of material price declines that can be directly linked to the disclosure of *new* information regarding Plaintiffs' *specific allegations*.

78. In my opinion, there are no damages from the offering attributable to Plaintiffs' allegations associated with the gray marketing and sales practice risks because the gray marketing risks were disclosed prior to the IPO and there are no material price declines that can be causally linked to either of the allegations. I conclude that factors other than the alleged omissions of gray marketing and sales practice risks caused the decline in value of Adams Golf's stock price during the class period.

79. I reserve the right to amend, revise and/or modify these opinions based upon changes, clarifications, and additions to any reports and documents I have reviewed and based on any new information provided to me or that may become available in the future.

Christopher M. James

7/28/06

Date